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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,236	02/13/2001	Robert J. Greenberg	S133-USA	1573

28284 7590 05/03/2007

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EXAMINER
EVANISKO, GEORGE ROBERT

ART UNIT	PAPER NUMBER
3762	

MAIL DATE	DELIVERY MODE
05/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	09/783,236	GREENBERG ET AL.	
	Examiner	Art Unit	
	George R. Evanisko	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4, 11-15, 18-22, 25, 26, 29, 30, 35, 36, 38-40, 48, 50-65* is/are pending in the application.

4a) Of the above claim(s) *11-15,18-22,25,26,48 and 51-65* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,29,30,35,36,38-40 and 50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 11-15, 18-22, 25, 26, 48, and 51-65 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/27/06.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 29, 30, 35, 36, 38-40, and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the claim is vague and the preamble is inconsistent with the claim body. There is nothing in the claim body that makes it an "electrode array body" since no electrodes are recited. In addition, the claim is incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: electrodes to make the device an electrode array body. It is suggested to include a claim such as claim 35 into claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223).

Suaning discloses a curved flexible retinal electrode array body (e.g. abstract and figure 1) with electrodes and electrodes capable of being used as ground electrodes and shows in figure 7 the use of a handle (702) and an aperture for a tack. In addition, Suaning states that the implantable device should be made of biocompatible material (e.g. col. 7, line 55) and that the system can be covered with silicone (e.g. col. 23, line 44) but does not specifically state that the system is curved in multiple dimensions to conform to the spherical curvature of the retina. Scribner (or Chow) teaches that it is known to have the surface of a retinal electrode be curved/spherical to match the curvature of the retina for a better fit of the device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the retinal electrode as taught by Suaning, with the retinal electrode curved/spherical to match the curvature of the retina (i.e. curved in multiple dimensions) as taught by Scribner or Chow,

since such a modification would provide a retinal electrode having the surface of the retinal electrode be curved/spherical to match the curvature of the retina for a better fit of the device.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223). Suaning shows in figure 7 the aperture for the tack and is a reinforced aperture since it is not closer to the edge of the device and/or since the silicone is the reinforcement. It is noted that the claim does not state what is doing the reinforcing or what it is reinforced relative to.

In the alternative, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the tack aperture as taught by Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223), with a reinforced tack aperture since it was known that apertures are reinforced to prevent tearing of the material when something is placed in the aperture to hold an element in position.

Claims 3 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223) and further in view of Scribner as applied to claim 1 above.

Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223) discloses the claimed invention except for the radius of curvature decreasing or tapered at the edges. Scribner shows in figure 3A (or figure 7) that it is known to use a radius of curvature decreasing or tapered at the edges to gradually reduce the contact area of the retinal electrode body with the retina and thereby reduce/eliminate stress concentrations. This

decreasing radius of curvature or tapered edge can be seen in figure 3A (or figure 7) where the left and right edges of the electrode body are located (not the glass element, 32 or 102, but the other part of the body, such as 58/104). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the retinal electrode as taught by Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223), with a radius of curvature decreasing or tapered at the edges as taught by Scribner, in order to have a retinal electrode body with a radius of curvature decreasing or tapered at the edges to gradually reduce the contact area of the retinal electrode body with the retina and thereby reduce/eliminate stress concentrations.

Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suaning (6458157) in view of Scribner (6393327) and further in view of Chow or Suaning in view of Chow (5024223) as applied to claim 36 above.

Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223) discloses the claimed invention except for the hemi-tube and the internal hole diameter approximately equal to the tube wall thickness. Chow teaches that it is known to use loops to aid in manipulation of the device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the retinal electrode as taught by Suaning (6458157) in view of Scribner (6393327) or Suaning in view of Chow (5024223), with the loops/hemi-tube as taught by Chow, since such a modification would provide a retinal electrode with a loop/hemi-tube to aid in manipulation of the device.

In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the loop/hemi-tube as taught by Suaning (6458157) in view of Scribner (6393327) and further in view of Chow or Suaning in view of Chow (5024223) with the internal hole diameter approximately equal to the tube wall thickness since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art [*In re Aller*, 105 USPQ 233].

Claims 4, 29, 30, and 38 rejected under 35 U.S.C. 103(a) as being unpatentable over Suaning in view of Scribner or Suaning in view of Chow and further in view of Scribner (rejection of claim 3), Suaning in view of Scribner or Suaning in view of Chow (rejection of claim 1), and Suaning in view of Scribner and further in view of Chow or Suaning in view of Chow (rejection of claim 36) as applied to claims 3, 1, 1, and 36, respectively above.

The modified Suaning (the rejections given above) discloses that the device is flexible, elastomeric and further that it can be covered in silicone (e.g. col. 23), but does not disclose the silicone is silicone having a hardness of about 50 or less or about 25 or less on the Shore A scale. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the retinal electrode as taught by the modified Suaning with the silicone being silicone having a hardness of about 50 or less or about 25 or less on the Shore A scale, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art [*In re Aller*, 105 USPQ 233].

In the alternative for Suaning disclosing the retinal electrode being silicone and the silicone having a hardness of about 50 or less or about 25 or less on the Shore A scale. It would

have been obvious to one having ordinary skill in the art at the time the invention was made to modify the retinal electrode as taught by the modified Suaning, with the retinal electrode being silicone and the silicone having a hardness of about 50 or less or about 25 or less on the Shore A scale since it was known in the art that retinal electrodes are made of silicone since this material has been approved by the FDA for intraocular use and exhibits proper electrical and biological characteristics for use in such a visual prosthesis and that using the silicone having a hardness of about 50 or less or about 25 or less on the Shore A scale is well known to provide the proper hardness of the device for use in the body.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Humayun et al is one example of many showing the use of silicone for a retinal electrode array body.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Evanisko whose telephone number is 571 272 4945. The examiner can normally be reached on M-F 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571 272 4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George R Evanisko
Primary Examiner
Art Unit 3762
4/27/7

GRE
April 26, 2007